SYSTEMS AND METHODS FOR HIERARCHICAL ANALYSIS OF CONTRAST ENHANCED MEDICAL IMAGING INFORMATION

ABSTRACT OF THE DISCLOSURE

A method for analyzing or processing contrast enhanced medical imaging information includes determining whether one or more candidate voxel sets within a Volume of Interest (VOI) exhibit washout curve behavior. If so, the method may identify a candidate voxel set exhibiting washout behavior as a likely malignancy. Otherwise, a method may determine whether one or more candidate voxel sets within the VOI exhibit plateau curve behavior, in which case the method may identify a candidate voxel set exhibiting plateau behavior as a likely malignancy. Otherwise, the method may identify a candidate voxel set exhibiting persistent enhancement behavior as a likely malignancy. In one embodiment, a candidate voxel set exhibiting a given type of time dependent imaging signal intensity curve or profile may be identified as a likely malignancy based upon a highest percent enhancement value.